S/N 10/554,708

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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JAN 02	STN pricing information for 2008 now available
NEWS	3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	5	JAN 28	MARPAT searching enhanced
NEWS	6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS	7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS	8	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
NEWS	9	FEB 08	STN Express, Version 8.3, now available
NEWS	10	FEB 20	PCI now available as a replacement to DPCI
NEWS	11	FEB 25	IFIREF reloaded with enhancements
NEWS	12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS	13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS	14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/CAplus and CASREACT patent number format for U.S. applications updated
NEWS	17	MAR 31	LPCI now available as a replacement to LDPCI
NEWS	18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	22	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	23	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	24	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	25	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	26	JUN 06	KOREAPAT updated with 41,000 documents

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

NEWS	HOURS	STN Operating Hours Plus Help Desk Availability
NEWS	LOGIN	Welcome Banner and News Items
NEWS	IPC8	For general information regarding STN implementation of IPC 8

S/N 10/554,708

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FILE 'HOME' ENTERED AT 23:16:40 ON 08 JUN 2008

=> set abbr on perm
SET COMMAND COMPLETED

=> set plurals on perm
SET COMMAND COMPLETED

=> file uspatall caplus japio
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.63       0.63

FILE 'USPATFULL' ENTERED AT 23:18:08 ON 08 JUN 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPATOLD' ENTERED AT 23:18:08 ON 08 JUN 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 23:18:08 ON 08 JUN 2008
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FILE 'JAPIO' ENTERED AT 23:18:08 ON 08 JUN 2008
COPYRIGHT (C) 2008 Japanese Patent Office (JPO)- JAPIO

=> s (imidat? or imidiz? or imidis?) and supercritical?
L1          159 (IMIDAT? OR IMIDIZ? OR IMIDIS?) AND SUPERCRITICAL?

=> s sma (s)(polymer? or copolymer?)
L2         4630 SMA (S)(POLYMER? OR COPOLYMER?)

=> s l1 and l2
L3            0 L1 AND L2

=> s (styren? or vinyl(2a)aromatic)(3a)copoly? or poly(1w)styren?(1w)co?
   1 FILES SEARCHED...
TERM 'CO?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED
You have entered a truncated stem which occurs in too many terms.
Make the stem longer and try again.  For example, if your original
term was 'degr?' to search for variations and the abbreviation for
'degradation', you could replace it with the expression '(degrdn OR
degrad?)'.  If your search term was numeric, e.g., 'C>5', reduce the
size of the range.
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=> s (styren? or vinyl(2a)aromatic)(3a)copoly? or poly(1w)styren?(3w)maleic
anhydride
L4      279533 (STYREN? OR VINYL(2A) AROMATIC)(3A) COPOLY? OR POLY(1W) STYREN?(
               3W) MALEIC ANHYDRIDE

=> s l1 and l4
L5          11 L1 AND L4

=> d l5 1-11 ibib abs

L5   ANSWER 1 OF 11  USPATFULL on STN
ACCESSION NUMBER:       2008:118581  USPATFULL
TITLE:                  Ink-jet ink and cured film obtained from same
INVENTOR(S):            Satou, Hiroyuki, Ichihara-shi, JAPAN
                        Deyama, Yoshihiro, Ichihara-shi, JAPAN
                        Yamahiro, Mikio, Ichihara-shi, JAPAN
PATENT ASSIGNEE(S):     CHISSO Corporation (non-U.S. corporation)

                             NUMBER       KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 20080103280     A1   20080501
APPLICATION INFO.:      US 2007-976689     A1   20071026  (11)

                               NUMBER        DATE
                        ------------------ --------
PRIORITY INFORMATION:   JP 2006-290740     20061026
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   HOGAN & HARTSON LLP, IP GROUP, COLUMBIA SQUARE, 555
                        THIRTEENTH STREET, N.W., WASHINGTON, DC, 20004, US
NUMBER OF CLAIMS:       33
EXEMPLARY CLAIM:        1
LINE COUNT:             2088
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The invention provides an ink-jet ink including a fluorine-containing
       compound (C) in the form of fluorosilsesquioxane having an organic group
       having 1 to 100 carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5   ANSWER 2 OF 11  USPATFULL on STN
ACCESSION NUMBER:       2007:140924  USPATFULL
TITLE:                  Continuous process for the production of combinatorial
                        libraries of modified materials
INVENTOR(S):            Nelson, James M., Roseville, MN, UNITED STATES
                        Marx, Ryan E., Cottage Grove, MN, UNITED STATES
                        Cernohous, Jeffrey J., Hudson, WI, UNITED STATES
                        McNerney, James R., Inver Grove Heights, MN, UNITED
                        STATES
PATENT ASSIGNEE(S):     3M Innovative Propeties Company (U.S. corporation)

                             NUMBER       KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 20070122915     A1   20070531
APPLICATION INFO.:      US 2006-646856     A1   20061228  (11)
RELATED APPLN. INFO.:   Continuation of Ser. No. US 2002-211219, filed on 2 Aug
                        2002, GRANTED, Pat. No. US 7157283
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST.
```

PAUL, MN, 55133-3427, US
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 1325
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A system is provided wherein a devolatilizing reactor is used to make combinatorial libraries of materials. Examples of suitable reactors include continuous high viscosity devolatilizers and continuous devolatilizing kneaders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 11 USPATFULL on STN
ACCESSION NUMBER: 2007:107637 USPATFULL
TITLE: Method for preparing styrene and maleimide copolymer using super critical fluid
INVENTOR(S): Kim, Dong Ryul, Daejeon, KOREA, REPUBLIC OF
Park, Sang Hyun, Daejeon, KOREA, REPUBLIC OF
Lee, Hee Hyun, Daejeon, KOREA, REPUBLIC OF

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20070093610	A1	20070426	
APPLICATION INFO.:	US 2004-554708	A1	20040512	(10)
	WO 2004-KR1090		20040512	
			20051027	PCT 371 date

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Mckenna Long & Aldridge LLP, 1900 K Street, NW, Washington, DC, 20006, US
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
LINE COUNT: 593
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed is a method for preparing copolymers of styrene and maleimide by imidization-extrusion of copolymers of styrene and maleic anhydride using a supercritical fluid. The method can be performed at a lower temperature compared to a conventional method and can remove residual amines and by-products with ease, and thus can provide copolymers of styrene and maleimide having excellent optical properties, thermal properties and mechanical properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 11 USPATFULL on STN
ACCESSION NUMBER: 2004:231455 USPATFULL
TITLE: Process of manufacturing optical waveguide and connection structure of optical devices
INVENTOR(S): Oe, Kunishige, Kyoto, JAPAN
Yamashita, Kenichi, Kyoto, JAPAN
Mune, Kazunori, Osaka, JAPAN
Mochizuki, Amane, Osaka, JAPAN
Naitou, Ryuusuke, Osaka, JAPAN
PATENT ASSIGNEE(S): NITTO DENKO CORPORATION (U.S. individual)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20040178522	A1	20040916	
APPLICATION INFO.:	US 2004-760389	A1	20040121	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2003-15533	20030124

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., SUITE 800, WASHINGTON, DC, 20037
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 928
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides a process of manufacturing an optical waveguide for optically connecting a plurality of optical devices, comprising the steps of: disposing a resin composition between two or more optical devices, the resin composition comprising a resin and a 1,4-dihydropyridine derivative, forming an optical path through the resin composition between the optical devices by light having a wavelength capable of inducing a structural change in the 1,4-dihydropyridine derivative, and removing the 1,4-dihydropyridine derivative from the resulting resin composition. Also disclosed is a connection structure obtained by the process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 11 USPATFULL on STN
ACCESSION NUMBER: 2004:31988 USPATFULL
TITLE: Process to modify polymeric materials and resulting compositions
INVENTOR(S): Nelson, James M., Roseville, MN, UNITED STATES
Marx, Ryan E., Cottaga Grove, MN, UNITED STATES
Cernohous, Jeffrey J., Hudson, WI, UNITED STATES
McNerney, James R., Inver Grove Heights, MN, UNITED STATES
Jones, Todd D., St. Paul, MN, UNITED STATES
Hanley, Kenneth J., Eagan, MN, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20040024130	A1	20040205	
APPLICATION INFO.:	US 2002-211415	A1	20020802	(10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: 3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
LINE COUNT: 1799
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a method for modifying a polymer by carrying out a thermally-induced reaction in a mixing apparatus having a high shear environment and devolatilization capabilities. Also disclosed are the resulting materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 11 USPATFULL on STN
ACCESSION NUMBER: 2004:31259 USPATFULL
TITLE: Continuous process for the production of combinatorial

libraries of modified materials
INVENTOR(S): Nelson, James M., Roseville, MN, UNITED STATES
Marx, Ryan E., Cottage Grove, MN, UNITED STATES
Cernohous, Jeffrey J., Hudson, WI, UNITED STATES
McNerney, James R., Inver Grove Heights, MN, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20040023398	A1	20040205	
	US 7157283	B2	20070102	
APPLICATION INFO.:	US 2002-211219	A1	20020802	(10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: 3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
LINE COUNT: 1342
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A system is provided wherein a devolatilizing reactor is used to make combinatorial libraries of materials. Examples of suitable reactors include continuous high viscosity devolatilizers and continuous devolatilizing kneaders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 11 USPATFULL on STN
ACCESSION NUMBER: 2002:337815 USPATFULL
TITLE: Golf ball compositions including microcellular materials and methods for making same
INVENTOR(S): Harris, Kevin M., New Bedford, MA, UNITED STATES
Rajagopalan, Murali, South Dartmouth, MA, UNITED STATES
Cavallaro, Christopher, Lakeville, MA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20020193179	A1	20021219	
	US 6676866	B2	20040113	
APPLICATION INFO.:	US 2002-142168	A1	20020510	(10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-565108, filed on 4 May 2000, GRANTED, Pat. No. US 6386992
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SWIDLER BERLIN SHEREFF FRIEDMAN, LLP, 3000 K STREET, NW, BOX IP, WASHINGTON, DC, 20007
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 1034
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention is directed to golf balls including one or more foamed, microcellular materials. The invention also encompasses methods of controlling or adjusting one or more material properties or the weight distribution of a golf ball, and methods of forming golf balls including such microcellular materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2002:108265 USPATFULL
TITLE: Golf ball compositions including microcellular materials and methods for making same
INVENTOR(S): Harris, Kevin M., New Bedford, MA, United States
Rajagopalan, Murali, South Dartmouth, MA, United States
Cavallaro, Christopher, Lakeville, MA, United States
PATENT ASSIGNEE(S): Acushnet Company, Fairhaven, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6386992	B1	20020514	
APPLICATION INFO.:	US 2000-565108		20000504	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Sewell, Paul T.
ASSISTANT EXAMINER: Hunter, Jr., Alvin A.
LEGAL REPRESENTATIVE: Swidler Berlin Shereff Friedman, LLP
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 963
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention is directed to golf balls including one or more foamed, microcellular materials. The invention also encompasses methods of controlling or adjusting one or more material properties or the weight distribution of a golf ball, and methods of forming golf balls including such microcellular materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 11 USPAT2 on STN
ACCESSION NUMBER: 2004:31259 USPAT2
TITLE: Continuous process for the production of combinatorial libraries of modified materials
INVENTOR(S): Nelson, James M., Roseville, MN, UNITED STATES
Marx, Ryan E., Cottage Grove, MN, UNITED STATES
Cernohous, Jeffrey J., Hudson, WI, UNITED STATES
McNerney, James R., Inver Grove Heights, MN, UNITED STATES
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 7157283	B2	20070102	
APPLICATION INFO.:	US 2002-211219		20020802	(10)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Levkovich, Natalia
LEGAL REPRESENTATIVE: Edman, Sean J.
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
LINE COUNT: 1396
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A system is provided wherein a devolatilizing reactor is used to make combinatorial libraries of materials. Examples of suitable reactors include continuous high viscosity devolatilizers and continuous devolatilizing kneaders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 11 USPAT2 on STN
ACCESSION NUMBER: 2002:337815 USPAT2
TITLE: Golf ball compositions including microcellular materials and methods for making same
INVENTOR(S): Harris, Kevin M., New Bedford, MA, United States
Rajagopalan, Murali, South Dartmouth, MA, United States
Cavallaro, Christopher, Lakeville, MA, United States
PATENT ASSIGNEE(S): Acushnet Company, Fairhaven, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6676866	B2	20040113
APPLICATION INFO.:	US 2002-142168		20020510 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-565108, filed on 4 May 2000, now patented, Pat. No. US 6386992
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kuhns, Allan R.
LEGAL REPRESENTATIVE: Swidler Berlin Shereff Friedman, LLP
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 973
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention is directed to golf balls including one or more foamed, microcellular materials. The invention also encompasses methods of controlling or adjusting one or more material properties or the weight distribution of a golf ball, and methods of forming golf balls including such microcellular materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1016086 CAPLUS
DOCUMENT NUMBER: 141:424600
TITLE: Method for preparing styrene and maleimide copolymer using supercritical fluids
INVENTOR(S): Kim, Dong-Ryul; Park, Sang-Hyun; Lee, Hee-Hyun
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004101636	A2	20041125	WO 2004-KR1090	20040512
WO 2004101636	A3	20050217		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

KR 2004098896	A	20041126	KR 2003-31214		20030516
EP 1625170	A2	20060215	EP 2004-732516		20040512
EP 1625170	B1	20070704			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK					
CN 1780864	A	20060531	CN 2004-80011161		20040512
JP 2006522171	T	20060928	JP 2006-500694		20040512
AT 366265	T	20070715	AT 2004-732516		20040512
TW 263649	B	20061011	TW 2004-93113608		20040514
US 20070093610	A1	20070426	US 2005-554708		20051027
PRIORITY APPLN. INFO.:			KR 2003-31214	A	20030516
			WO 2004-KR1090	W	20040512

AB Disclosed is a method for preparing copolymers of styrene and maleimide by imidization-extrusion of copolymers of styrene and maleic anhydride using a supercrit. fluid. The method can be performed at a lower temperature compared to a conventional method and can remove residual amines and byproducts with ease, and thus can provide copolymers of styrene and maleimide having excellent optical properties, thermal properties and mech. properties.

=> d l5 5 ibib hit

L5 ANSWER 5 OF 11 USPATFULL on STN

ACCESSION NUMBER:	2004:31988 USPATFULL
TITLE:	Process to modify polymeric materials and resulting compositions
INVENTOR(S):	Nelson, James M., Roseville, MN, UNITED STATES Marx, Ryan E., Cottaga Grove, MN, UNITED STATES Cernohous, Jeffrey J., Hudson, WI, UNITED STATES McNerney, James R., Inver Grove Heights, MN, UNITED STATES Jones, Todd D., St. Paul, MN, UNITED STATES Hanley, Kenneth J., Eagan, MN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20040024130	A1	20040205
APPLICATION INFO.:	US 2002-211415	A1	20020802 (10)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427
NUMBER OF CLAIMS:	39
EXEMPLARY CLAIM:	1
LINE COUNT:	1799

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD [0046] One aspect of the present invention employs thermally-induced reactions to modify polymeric materials. Many types of thermally-induced reactions are suitable for the present invention. One suitable type of reaction is a rearrangement reaction in which the substituents or moieties of a molecule are rearranged to form a new molecule, i.e., the bonding site of a substituent or moiety moves from one atom to another in the same molecule. Another suitable type of reaction is an

elimination reaction in which one or more substituents is removed from a molecule. Specific types of reactions that can be carried out include, but are not limited to, pyrolysis reactions, acid-catalyzed reactions, deprotection reactions, condensation reactions, hydrolysis reactions, imidization reactions, base-catalyzed reactions, and deesterification, e.g., deacetylation. In a pyrolysis reaction, a complex molecule is broken into simpler units by the use of heat. In an acid-catalyzed reaction, acid is used to drive or induce the thermal reaction. In a deprotection reaction, a protecting group is removed to expose a reactive functional group. In a condensation reaction, two molecules react to form a new molecule and release a byproduct, which is typically water. In a hydrolysis reaction, water reacts with another molecule (e.g., ester) to form one or more new molecules. In an imidization reaction, anhydrides react with primary amines via an intermediate amic acid functionality to form an imide ring and water. In a base-catalyzed reaction, base is used to drive or induce the thermal reaction. In a deesterification reaction, an ester is converted into a carboxylic acid or an anhydride. In a deacetylation reaction, an ester is converted into an alcohol with removal of an acetyl group. See, for example, Hawker et al., Macromolecules, 1998, 31, 1024.

DETD [0066] The starting polymer systems may be synthesized in processes that are carried out in batch, semibatch, continuous stirred tank reactor (CSTR), tubular reactors, stirred tubular reactors, plug flow reactors (PFR), temperature controlled stirred tubular reactors as described in WO 0158962 A1 and co-pending U.S. patent app. Ser. No. 09/824,330, static mixers, continuous loop reactor, extruders, shrouded extruders as described in WO 9740929, and pouched reactors as described in WO 9607522 and WO 9607674. The media in which the polymerizations may take place are bulk, solution, suspension, emulsion, ionic liquids or supercritical fluids, such as supercritical carbon dioxide.

DETD [0075] where represents a bond in a polymerizable or polymer chain; R.sub.f is --C.sub.6F.sub.13, --C.sub.4F.sub.9, or --C.sub.3F.sub.7; R and R.sub.2 are each independently hydrogen or alkyl of 1 to 20 carbon atoms; n is an integer from 2 to 11; and x is an integer of at least 1. An example of a Formula I structure is N-methylperfluorobutanesulfonamido. The fluorinated materials may be end-functionalized at one or both terminus with reactive end groups. If there are two reactive end groups, they may be the same or different. Fluorinated diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators which contain protected functional groups that can be removed by post polymerization techniques. Suitable functional initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338.

DETD [0081] Various reactions may be carried out to produce acetylene-containing polymers. In these reactions, a sulfoxide is pyrolyzed to give the polyactylene and a sulfenic acid byproduct (RSOH) as shown in Formula II. For example, a benzenesulfenic acid may be eliminated from poly(phenyl vinyl sulfoxide)-containing copolymers to produce polyacetylene-containing copolymers, such as poly(styrene-acetylene) block copolymers. Polyacetylene is typically difficult to work with because it is very insoluble in other materials. However, including it in a block structure allows the final structure to remain soluble.

DETD [0094] Diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators which contain protected functional groups that can be removed

by post polymerization techniques. Suitable functional initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338.

DETD [0106] The polymeric materials produced by acid-catalyzed pyrolysis of methacrylic and acrylic esters are methacrylic/acrylic acid or methacrylic/acrylic anhydride functionalized polymers. These acid- and anhydride-functionalized polymers may participate in further grafting reactions including esterification, amidation, and imidization reactions.

DETD [0108] In the case of amidation or imidization, the acid- or anhydride-functionalized polymeric material is subjected to reaction with amine nucleophiles. Suitable amines that participate in this reaction consist of, but are not limited to, typically primary alkyl, aryl, and alkylaryl-amines. The primary amines formula is RNH.sub.2 wherein R stands for an alkyl group having 1 to 10 carbon atoms, a cycloalkyl group having 5 to 12 carbon atoms, an aralkyl group having 7 to 22 carbon atoms or an aryl group having 6 to 12 carbon atoms.

DETD [0110] Diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators, which contain protected functional groups that can be removed by post polymerization techniques. Suitable anionic initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338.

DETD Batch Synthesis of poly(styrene-acetylene) Block Copolymers via the Thermal Modification of poly(styrene-vinyl phenyl sulfoxide).

DETD [0144] This example illustrates the thermal elimination of benzenesulfenic acid from poly(styrene-vinyl phenyl sulfoxide) (P(S-VPS)) to produce a poly(styrene-acetylene) block copolymer.

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L5 ANSWER 6 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2004:31259 USPATFULL

TITLE: Continuous process for the production of combinatorial libraries of modified materials

INVENTOR(S): Nelson, James M., Roseville, MN, UNITED STATES
Marx, Ryan E., Cottage Grove, MN, UNITED STATES
Cernohous, Jeffrey J., Hudson, WI, UNITED STATES
McNerney, James R., Inver Grove Heights, MN, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20040023398	A1	20040205	
	US 7157283	B2	20070102	
APPLICATION INFO.:	US 2002-211219	A1	20020802	(10)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: 3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427

NUMBER OF CLAIMS: 27

EXEMPLARY CLAIM: 1

LINE COUNT: 1342

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM [0063] One aspect of the present invention employs thermally-induced reactions to modify polymeric materials. Many types of thermally-induced reactions are suitable for the present invention. One suitable type of reaction is a rearrangement reaction in which the substituents or moieties of a molecule are rearranged to form a new molecule, i.e., the bonding site of a substituent or moiety moves from one atom to another in the same molecule. Another suitable type of reaction is an elimination reaction in which one or more substituents is removed from a molecule. Specific types of reactions that can be carried out include, but are not limited to, pyrolysis reactions, acid-catalyzed reactions, deprotection reactions, condensation reactions, hydrolysis reactions, imidization reactions, base-catalyzed reactions, and deesterification, e.g., deacetylation. In a pyrolysis reaction, a complex molecule is broken into simpler units by the use of heat. In an acid-catalyzed reaction, acid is used to drive or induce the thermal reaction. In a deprotection reaction, a protecting group is removed to expose a reactive functional group. In a condensation reaction, two molecules react to form a new molecule and release a byproduct, which is typically water. In a hydrolysis reaction, water reacts with another molecule (e.g., ester) to form one or more new molecules. In an imidization reaction, anhydrides react with primary amines via an intermediate amic acid functionality to form an imide ring and water. In a base-catalyzed reaction, base is used to drive or induce the thermal reaction. In a deesterification reaction, an ester is converted into a carboxylic acid or an anhydride. In a deacetylation reaction, an ester is converted into an alcohol with removal of an acetyl group. See, for example, Hawker et al., Macromolecules, 1998, 31, 1024.

SUMM [0080] The starting polymer systems may be synthesized in processes that are carried out in batch, semibatch, continuous stirred tank reactor (CSTR), tubular reactors, stirred tubular reactors, plug flow reactors (PFR), temperature controlled stirred tubular reactors as described in WO 0158962 A1 and co-pending U.S. patent app. Ser. No. 09/824,330, static mixers, continuous loop reactor, extruders, shrouded extruders as described in WO 9740929, and pouched reactors as described in WO 9607522 and WO 9607674. The media in which the polymerizations may take place are bulk, solution, suspension, emulsion, ionic liquids or supercritical fluids, such as supercritical carbon dioxide.

SUMM [0090] represents a bond in a polymerizable or polymer chain; R.sub.f is --C.sub.6F.sub.13, --C.sub.4F.sub.9, or --C.sub.3F.sub.7; R and R.sub.2 are each independently hydrogen or alkyl of 1 to 20 carbon atoms; n is an integer from 2 to 11; and x is an integer of at least 1. The fluorinated materials may be end-functionalized at one or both terminus with reactive end groups. If there are two reactive end groups, they may be the same or different. Fluorinated diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators which contain protected functional groups that can be removed by post polymerization techniques. Suitable functional initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338.

SUMM [0095] Various reactions may be carried out to produce acetylene-containing polymers. In these reactions, a sulfoxide is pyrolyzed to give the polyactylene and a sulfenic acid byproduct (RSOH) as shown in Formula II. For example, a benzenesulfenic acid may be eliminated from poly(phenyl vinyl sulfoxide)-containing copolymers to

produce polyacetylene-containing copolymers, such as poly(styrene-acetylene) block copolymers. Polyacetylene is typically difficult to work with because it is very insoluble in other materials. However, including it in a block structure allows the final structure to remain soluble.

SUMM [0108] Diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators which contain protected functional groups that can be removed by post polymerization techniques. Suitable functional initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338.

SUMM [0119] The polymeric materials produced by acid-catalyzed pyrolysis of methacrylic and acrylic esters are methacrylic/acrylic acid or methacrylic/acrylic anhydride functionalized polymers. These acid- and anhydride-functionalized polymers may participate in further grafting reactions including esterification, amidation, and imidization reactions.

SUMM [0121] In the case of amidation or imidization, the acid- or anhydride-functionalized polymeric material is subjected to reaction with amine nucleophiles. Suitable amines that participate in this reaction consist of, but are not limited to, typically primary alkyl, aryl, and alkylaryl-amines. The primary amines formula is RNH.sub.2 wherein R stands for an alkyl group having 1 to 10 carbon atoms, a cycloalkyl group having 5 to 12 carbon atoms, an aralkyl group having 7 to 22 carbon atoms or an aryl group having 6 to 12 carbon atoms.

SUMM [0123] Diene, methacrylate and styrenic homo and block copolymers end-functionalized with alcohol(s), thiol(s), and/or amine(s) may be synthesized anionically by the use of suitable anionic initiators, which contain protected functional groups that can be removed by post polymerization techniques. Suitable anionic initiators are known in the art and are described in, e.g., U.S. Pat. No. 6,197,891, U.S. Pat. No. 6,160,054, U.S. Pat. No. 6,221,991, and U.S. Pat. No. 6,184,338. Objects and advantages of this invention are further illustrated by the following examples. The particular materials and amounts thereof, as well as other conditions and details, recited in these examples should not be used to unduly limit this invention.

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(FILE 'HOME' ENTERED AT 23:16:40 ON 08 JUN 2008)
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SET PLURALS ON PERM

FILE 'USPATFULL, USPATOLD, USPAT2, CAPLUS, JAPIO' ENTERED AT 23:18:08 ON 08 JUN 2008

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L1          159 S (IMIDAT? OR IMIDIZ? OR IMIDIS?) AND SUPERCRITICAL?
L2         4630 S SMA (S)(POLYMER? OR COPOLYMER?)
L3            0 S L1 AND L2
L4       279533 S (STYREN? OR VINYL(2A)AROMATIC)(3A)COPOLY? OR POLY(1W)STYREN?(
L5           11 S L1 AND L4
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L5 ANSWER 10 OF 11 USPAT2 on STN

ACCESSION NUMBER:	2002:337815 USPAT2
TITLE:	Golf ball compositions including microcellular materials and methods for making same
INVENTOR(S):	Harris, Kevin M., New Bedford, MA, United States Rajagopalan, Murali, South Dartmouth, MA, United States Cavallaro, Christopher, Lakeville, MA, United States
PATENT ASSIGNEE(S):	Acushnet Company, Fairhaven, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6676866	B2	20040113
APPLICATION INFO.:	US 2002-142168		20020510 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-565108, filed on 4 May 2000, now patented, Pat. No. US 6386992		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Kuhns, Allan R.		
LEGAL REPRESENTATIVE:	Swidler Berlin Shereff Friedman, LLP		
NUMBER OF CLAIMS:	16		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	973		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD 1. A supercritical fluid (SCF) of an atmospheric gas is injected into the polymer through a barrel to form a single-phase solution, with the SCF delivery system, screw, and injectors designed to allow for rapid dissolution;

DETD Block polystyrene TPEs suitable for use in this invention include blocks of polystyrene or substituted polystyrene, e.g., poly(α-methyl styrene) or poly(4-methyl styrene) chemically linked or joined to the ends of lower softening point blocks of either an unsaturated or saturated rubber. Unsaturated rubber types typically include butadiene, which can form styrene-butadiene-styrene (hereafter "SBS") block copolymers, or isoprene, which can form styrene-isoprene-styrene (hereafter "SIS") block copolymers, silicone rubber, balata, styrene-butadiene rubber ("SBR"), and the like. Examples of suitable commercially available thermoplastic SBS or SIS copolymers include the KRATON® D series from Shell Corporation of Houston, Tex., which includes KRATON® D2109, D5119 and D5298; VECTOR® from Dexco of Plaquemine, La.; and FINAPRENE® from Fina Oil and Chemical of Plano, Tex.

DETD Any conventional material or method may also be used in preparing the golf ball cover, which is typically disposed over the center or core. For example, as is well known in the art, ionomers, balata, and urethanes are all suitable golf ball cover materials. A variety of less conventional materials may also be used for the cover, e.g., thermoplastics such as ethylene- or propylene-based homopolymers and copolymers. These homopolymers and copolymers may also include functional monomers such as acrylic and methacrylic acid, fully or partially neutralized ionomers and their blends, methyl acrylate, methyl methacrylate homopolymers and copolymers, imidized amino group-containing polymers, polycarbonate, reinforced polycarbonate, reinforced polyamides, polyphenylene oxide, high impact polystyrene, polyether ketone, polysulfone, poly(phenylene sulfide), acrylonitrile-butadiene, acrylic-styrene-terephthalate, poly(ethylene terephthalate), poly(butylene terephthalate), poly(ethylene-vinyl

alcohol), poly(tetrafluoroethylene), and the like. Any of these polymers or copolymers may be further reinforced by blending with a wide range of density-adjusting fillers, including glass fibers or spheres, or metallic powders. The selection of a suitable cover, and application thereof over the mantle described herein, will be readily determinable by those of ordinary skill in the art, particularly in view of the disclosure herein.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	91.21	91.84

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

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